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D E N T A L

*Digest*

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DECEMBER 1943

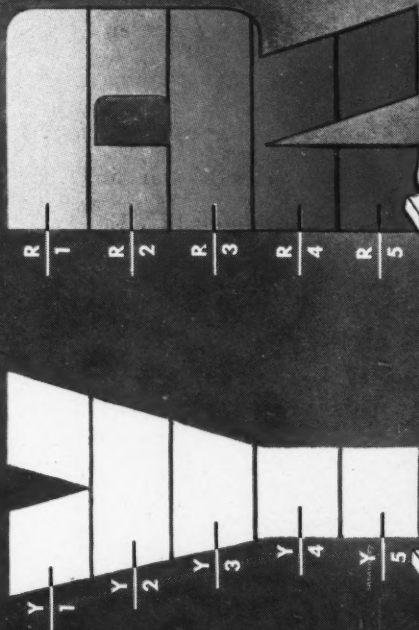
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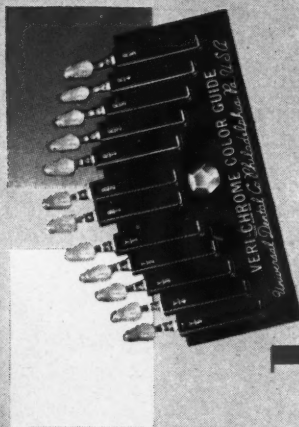
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# THE DENTAL Digest

VOL. 49

NO. 12

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EDWARD J. RYAN, B.S., D.D.S., *Editor*

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708 Church Street, Evanston, Illinois

NATHAN H. RAYBIN, D.D.S. (Western Reserve University School of Dentistry, 1932) is a general practitioner. Doctor Raybin describes a technique for the construction of lower dentures. The correct manipulation of the modeling compound for the preliminary impression is considered the essential feature in insuring stability.

JACK PERLOW (B.S., 1933, College of the City of New York; D.D.S., 1937, New York University College of Dentistry) is a general practitioner who wrote for us in March, 1940 on a COMBINATION COMPOUND BITE AND IMPRESSION.

W. I. TATE, D.D.S. is a graduate of Ohio State University College of Dentistry, the

year 1903. Doctor Tate stresses oral surgery and prosthetic dentistry in his practice. He presents here his report of a case of reconstruction of the nose. This is a field of service particularly suited to the skills of dentists. Similar reports of anatomic reconstruction appeared here in October, 1942 by Doctor David F. Heron; February, 1943 by Doctors R. W. Kimble and R. W. King; April, 1943 by Doctor Stanley D. Tylman, and September, 1943 by Doctor E. Lester Jones, Jr.

FRED A. SLACK, JR., D.D.S. (University of Pennsylvania, 1932) has published several articles with us on the use of acrylic. Last month he and Doctor E. Howell Smith presented an article on WAXING AND FLASKING OF ALL-ACRYLIC DENTURES. This month Doctor Slack takes up the subject of attachments and reinforcements for acrylic pontics.

HERMAN MEYERS, D.D.S. (University of Pennsylvania, 1917) has previously contributed to these pages: DIFFERENTIAL DIAGNOSIS (November, 1941) and LARGE SALIVARY CALCULUS IN SUBMAXILLARY GLAND (September, 1942). In this issue Doctor Meyers presents a method of locating retained tooth roots and foci of infection in edentulous jaws.

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# Preliminary Impression Technique Applicable to Lower Edentulous Jaws

NATHAN H. RAYBIN, D.D.S., Cleveland

## DIGEST

The four requirements of satisfactory dentures are: (1) the ability of the wearer to eat; (2) the ability of the wearer to speak with ease; (3) comfort; (4) pleasing appearance. Stability of dentures will help fulfill the first three requirements. To insure stability, the correct manipulation of the modeling compound in taking the preliminary impression is essential.

ARTIFICIAL dentures, to be satisfactory, must meet these four requirements: (1) The wearer must be able to eat with them; (2) the wearer must be able to talk with ease; (3) the dentures must be comfortable; (4) the dentures should be esthetically pleasing.<sup>1</sup> Stability of dentures, especially of lower dentures, will help fulfill the first three of these requirements.

The most significant step in the construction of a stable lower denture is the initial one, the preliminary impression. An average operator will spend hours in taking positional records, mounting the casts properly, and setting up the teeth, but he may devote only a few moments to taking a preliminary modeling compound impression on which the success of the lower denture depends.

1. The preliminary impression is poured in medium-setting model plaster. From 6 to 8 minutes' setting time is allowed; this permits ample time for trimming.

2. The cast obtained from the preliminary impression is used for constructing a suitable shellac base-plate tray,<sup>2</sup> vulcanite tray,<sup>3</sup> or acrylic tray<sup>1</sup>

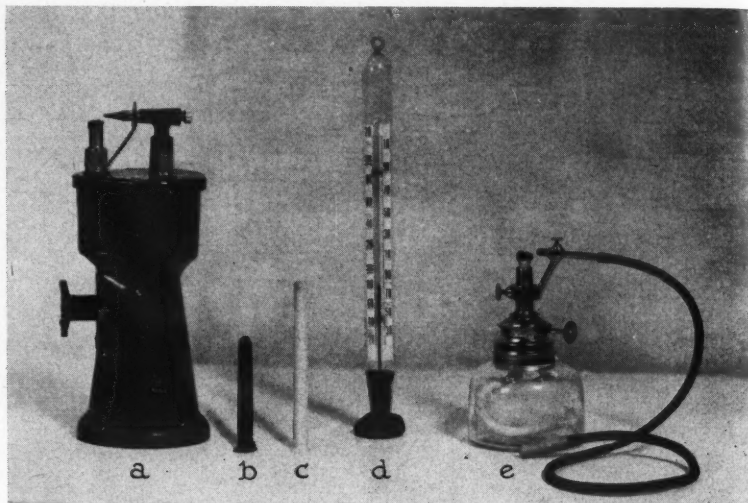


Fig. 1—*a*, Trigger-type alcohol torch; *b*, *c*, compound tracing sticks; *d*, floating dairy thermometer; *e*, mouth blowtorch.

to be utilized in obtaining the correction or final impression.

The principles established by Tuller and Fournet<sup>3</sup> in 1935 provided a guide by which to determine landmarks for the proper outline of a preliminary impression.

## Armamentarium

No complicated or expensive instruments are employed in taking preliminary impressions. A pan for heating water; a floating dairy thermometer; modeling compound; a sharp knife; a selection of aluminum trays, and a trigger-type alcohol torch (Fig. 1) are required. A trigger-type torch or a mouth blowtorch, for which wood alcohol is used, is a necessity. I believe that skillful manipulation of compound is essential to good prosthetic dentistry, and that it is almost impossible to manipulate compound effectively without the use of an alcohol torch. Once a den-

tist learns to handle a torch, he will learn to control modeling compound.

## Modeling Compound

Modeling compounds are low-fusing, medium-fusing, and high-fusing. Ordinarily the white or green tracing stick compounds are low-fusing; the red compounds are medium-fusing, and the black compounds are high-fusing. In this procedure the medium-fusing red compound is preferred, because when it is manipulated properly, it places tissue and reproduces gross surface detail.

## Procedure

**Metal Tray Selection and Treatment**—A thin metal tray is trimmed and fitted to the lower jaw. The tray need not be closely adapted to the ridge but must follow the ridge curvature. The heel portion of the tray must cover at least three fourths of the retromolar pad. That portion of the tray which extends buccally from the retromolar pad to the disto-buccal flange of the tray margin must be bent upward in such a manner that the upward portion of the tray heel will meet the main body of the tray

<sup>2</sup>Atkinson, L. W.: A New Technic for Taking Impressions for Stable Lower Dentures, *J.A.D.A.* 28:1478-1488 (September) 1941.

<sup>3</sup>Fournet, S. C. and Tuller, C. S.: Fournet-Tuller Application of New Mechanical Principles to Produce Full Lower Dentures with Stability Surpassing the Best Modern Upper Dentures, *Proc. North Carolina D. Soc.* 22:91-100 (July) 1938.

<sup>1</sup>Schlosser, R. O.: *Complete Denture Prosthesis*, Philadelphia, W. B. Saunders Company, 1940.

proper at an angle of 40 degrees, which is approximately the correct angle for the average jaw. The vertex of this angle should be in the second molar area (Figs. 2 and 3). Three accomplishments are effected with this treatment of the tray heel: (1) The entire retromolar pad and the resilient tissue beyond it will be reproduced in compound; (2) compound can be carried to and placed against the ramus; (3) the compound will displace the masseter and buccinator muscles in the disto-buccal area of the denture, thereby revealing a clear imprint of the external oblique ridge.

The tray should be checked carefully and trimmed with contouring shears, so that the tray does not impinge on any buccal, labial, or lingual muscle attachments and will permit the free play of these muscles. The tray should extend 2 mm. beyond the mylohyoid ridge on the lingual side; this extension of the lingual flange will help carry the compound to the floor of the mouth. Any inaccuracies in the metal tray will be clearly evident in the preliminary impression. If the first preliminary impression is grossly imperfect, the tray must be recontoured or another tray selected.

**Compound Manipulation**—1. One and a half cakes of medium-fusing red modeling compound are softened in water, the temperature of which is 125° F.; the softened roll of compound is kneaded between the fingers and the palms.

2. Hot compound is luted from a tracing stick into the anterior and heel portions of the tray.

3. While the luted areas of compound are still in the flowing stage, the water-softened compound is placed into the tray in the form of a horseshoe. This is pressed firmly against the luted portions to insure adhesion between the tray and the compound during all subsequent operations.

4. While the compound is still soft, form a gutter in the compound<sup>4</sup> with the side of the moistened thumb of each hand. This gutter should be almost as deep as the ridge is high. It

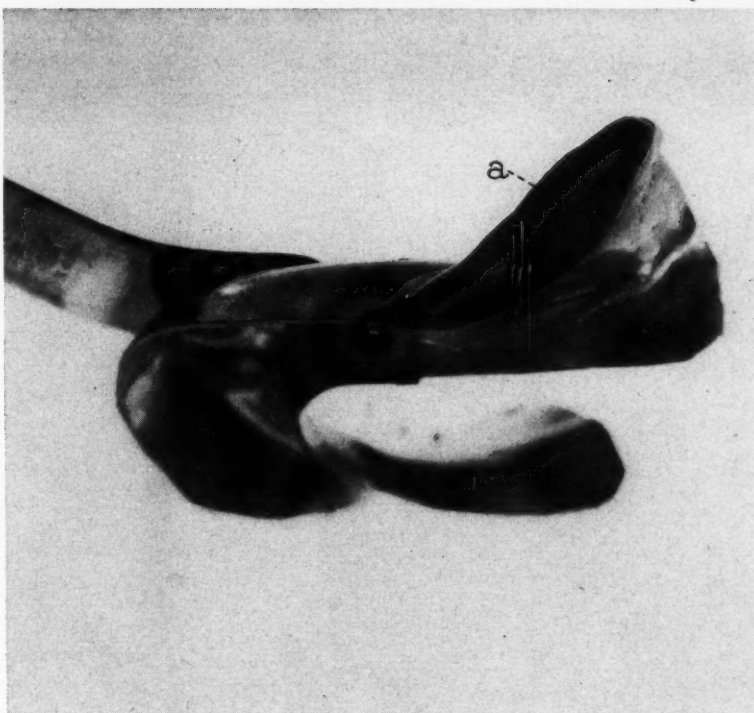


Fig. 2—a, Disto-buccal portion of metal tray outlined with black modeling compound to show curved area (view of tissue side of tray).

should begin at one heel and should extend completely around the tray. All flanges, including the area over the crest of the ridge, should be of a uniform thickness of 4 mm. (Fig. 4). The most important reason for making the gutter is to allow for any inaccuracies in the metal tray.

5. The metal tray will cool almost to room temperature and the com-

ound will begin to stiffen in the 30 seconds which it takes to form the gutter. The pointed flame of the alcohol blowtorch is therefore directed into all parts of the compound gutter. The hot flame is kept moving constantly to prevent scorching of the compound; moreover, there must be soft, heated compound to a depth of 3 mm., with 1 mm. of cool com-

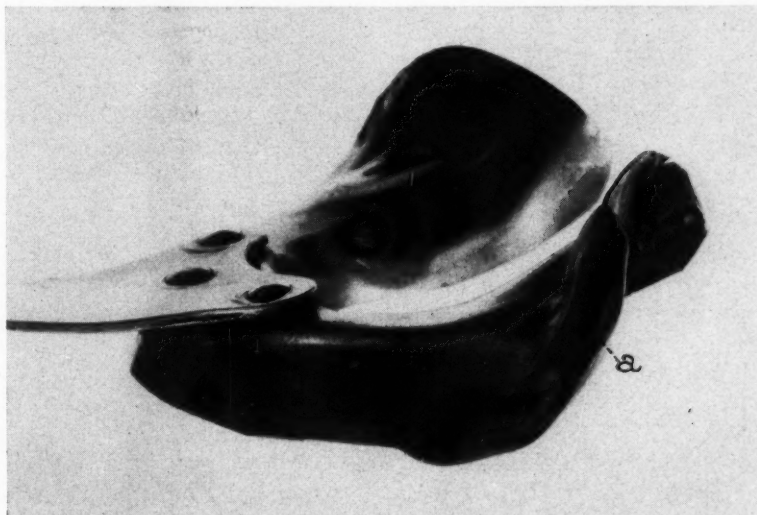


Fig. 3—a, Same as Fig. 2 except that it is a side view of the curved portion.





Fig. 4—Gutter formation in modeling compound.

pound which, with the moderately cold metal tray, will serve as "stops." These cold "stops" will prevent the metal tray from showing through the

compound during subsequent impression taking.

6. The moving flame of the torch is directed to the flange portion on the



Fig. 5—Gutter formation after compound has been softened and glazed to depth of 3 mm.

outside of the gutter and the heating of the inside of the gutter is repeated (Fig. 5).

7. The tray and its compound are then dipped into water of 105°F. and quickly withdrawn. The reasons for tempering the impression in water of 105°F. before inserting in the mouth are twofold: First, in directing the flame of the blowtorch against the compound, some areas have been heated to a greater depth and higher degree than others. Tempering the mass in warm water quickly equalizes the temperature of the soft compound,<sup>4</sup> so that gross surface detail and an equally balanced placement of tissue will be demonstrated in the compound impression. Second, the impression is tempered to reduce the surface temperature of the compound, so that it will be safely tolerated by the oral tissues.<sup>4</sup>

8. The right corner of the patient's mouth is lifted with the left hand, and the tray carefully rotated clockwise into the mouth.

9. The entire compound mass is converged directly over the ridge and the impression is seated with firm pressure.<sup>1</sup> The pressure should be maintained for a full minute by placing the forefingers on the upper surface of the metal tray in the second bicuspid areas and the thumbs against the under surface of the mandible.

10. After a minute, the impression is chilled with cold water and removed carefully by pulling the lower lip directly outward and downward, thereby breaking the seal.

#### Landmarks

The impression should be examined carefully (Fig. 6). Any accepted technique demands that the following landmarks be prominent in the impression:<sup>3</sup> (1) the entire retromolar pad of tissue; (2) the face of the ramus; (3) the external oblique ridge; (4) the mylohyoid ridge; (5) the muco-buccal and muco-labial tissue folds; (6) the floor of the mouth, and (7) the entire ridge crest (Figs. 7 and 8). If most of these landmarks have not been reproduced in the im-

<sup>4</sup>Clapp, G. W. and Tench, R. G.: Professional Denture Service, New York, Dentists' Supply Company, 1926.

pression, another impression should be taken.

If the first impression lacks one or two of the landmarks, a simple correction can be made as follows:

1. Reduce the impression by knife-trimming away all unnecessary or excessive bulk of compound, being careful to preserve all the important landmarks of the impression.

2. Dry the area near the defect; the remainder of the impression may remain moist to facilitate insertion into the mouth.

3. Heat the end of a compound tracing stick in a Bunsen flame and add sufficient hot compound to the impression to include the deficient area and several millimeters around it.

4. Direct the flame of the alcohol torch to the fresh addition of compound until it is in the molding stage.

5. Temper the compound by permitting a few drops of lukewarm water to run off the index finger onto the freshly added layer of compound.

6. Pull back the right corner of the lips; rotate the tray into the mouth; seat and apply firm pressure for 1 minute. Chill thoroughly with cold water and remove from the mouth.

7. If all the aforementioned landmarks are present, chill the impression thoroughly for 2 minutes in cold water, and prepare for the boxing procedure.

*Boxing the Impression*—An hour of painstaking work may be lost if the operator neglects to box the lower preliminary impression.

1. A piece of black carding wax, 4 mm. wide and 8 inches long, is carved, and softened slightly in a Bunsen flame.

2. Bend, contour, and lute the wax to all margins of the impression beginning at the disto-lingual aspect of one heel to the disto-lingual of the other heel.

3. The tongue area of the impression is then filled in with one layer of carding wax. The margin of the wax must lie at least 2 mm. below the margins of the impression, so that a complete and faithful copy of the entire impression and all its margins will be produced in the plaster model.



Fig. 6—Preliminary impression.

4. Surround the entire impression with a double layer of medium-fusing base-plate wax and pour the impression with model plaster which sets in

from 6 to 8 minutes.

*Final Impression*—I employ two methods in making corrections or in taking the final impression; both

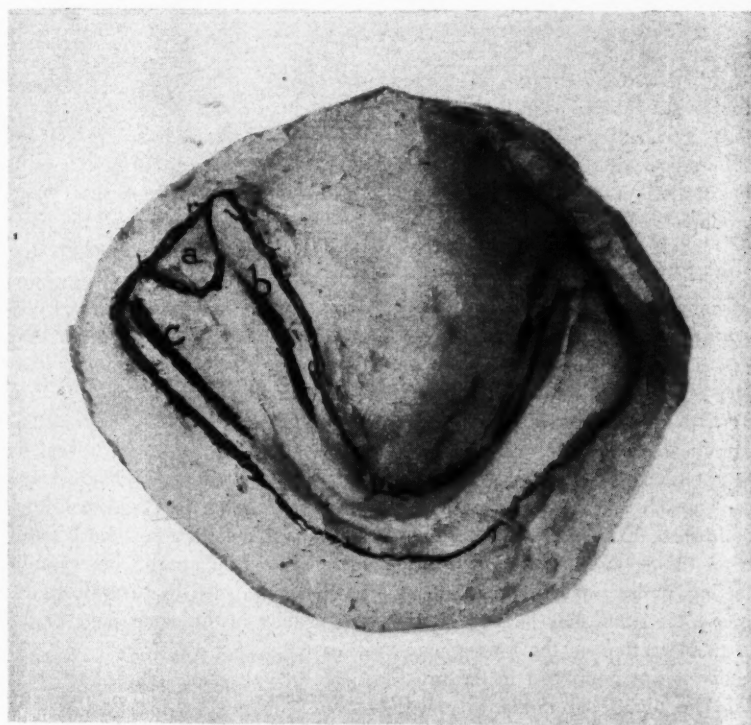


Fig. 7—Section of preliminary cast showing: a, retromolar pad; b, mylohyoid ridge; c, external oblique ridge.

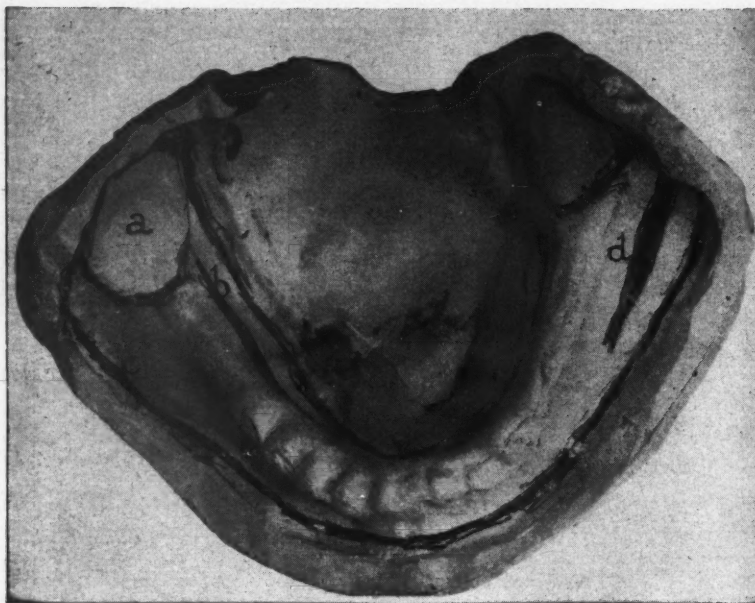


Fig. 8—Plaster model from a preliminary impression showing: a, retromolar pad; b, mylohyoid ridge; c, outline for shellac base-plate tray, vulcanite or acrylic tray prior to final trimming in the mouth; d, external oblique ridge.

techniques, demand a perfect preliminary impression.

**First Method:**<sup>2</sup> Construct a shellac base-plate tray on the preliminary model; mold progressively heated sections of the entire flange in the mouth and make the final pressure-equalizing correction with impression wax.

**Second Method:**<sup>3</sup> Construct a vulcanite or acrylic tray on the preliminary plaster model and make the final correction with medium-fusing modeling compound.

#### Comment

The foregoing procedure is applicable to the upper preliminary impression. In taking an upper preliminary impression, however, it is wise to heap some of the compound in the center of the tray in order to facilitate a delicate reproduction of the vault.

10012 Euclid Avenue.

## Ulcerative Gingivo-Stomatitis

(An Abstract)

[Surgeon Rear-Admiral J. Falconer Hall, C.M.G.: Proceedings of the Royal Society of Medicine, 36:5 (June) 1943]

IN A JOINT discussion on ulcerative gingivo-stomatitis (Vincent's infection) by members of the Section of Odontology with United Services Section, the following salient points were developed:

#### Diagnosis

The disease is characterized by rapidly spreading ulcero-membranous destruction of the gingival margin, usually originating in an area of stagnation, such as the gum flap over an erupting lower third molar, or interdental spaces in malalignment which are inaccessible to the toothbrush. Extension is by continuity of tissue, and, depending on the starting point and the direction of spread, the result may be a gingivitis or an ulceration on the fauces; contiguity is not important in the process. The tongue is rarely involved. Although there may be severe and widespread ulceration of the gums,

the cheeks and lips are not proportionately affected.

When the attack is severe and occurs in an uncared for mouth or is left untreated for even a short time, patients are ill and show all the signs of acute toxemia. Another characteristic of the disease is the associated unpleasant fetor; its presence is generally sufficient to make a tentative diagnosis. The membranous exudate varies in color, being gray or yellowish gray, and follows the irregular outline of the affected part. Usually the gums are intensely inflamed and bleed readily on the slightest injury.

The existence of a positive Wassermann's reaction apart from syphilis has been recorded by several observers, usually in the acute stage of the disease.

#### Etiology

The cause of Vincent's infection remains obscure and there is no

agreement as to whether it is a communicable disease, contagious or infectious in character. Deficiency of the accessory food factors has been suggested as a predisposing cause. Vitamins B and C have received attention in this connection, but, although beneficial results have been obtained by the use of ascorbic acid or niacin, a specific causal relationship has not been demonstrated. Avitaminosis and debilitating conditions affect the incidence and the duration of the disease; functional disturbances must be taken into account.

That Vincent's infection is the oral manifestation of some general disease has also been considered as a possible explanation. In cases of leukemia and agranulocytosis, lesions resembling acute ulcerative gingivitis are found in the mouth. These lesions must be differentiated.

The general opinion is that what

(Continued on page 539)



# Bar Construction and Assemblage in Acrylic Fixed Bridgework

JACK PERLOW, D.D.S., Brooklyn

## DIGEST

A simplified technique is suggested whereby provision is made for replacement without removal of fixed bridgework. The technique is outlined and illustrated with specific reference to bar construction and assemblage in acrylic fixed bridgework.

IN FIXED BRIDGEWORK, in which removal is difficult, provision should be made for proper replacement without having to remove the bridge. I have been using a simplified technique, which not only provides maximum strength but adequately follows the contour of any type of ridge. It permits bridge construction with difficult bites and provides for easy replacement with the bridge in the mouth.

## Technique

1. A plaster impression is taken with gold attachments, such as inlays, in their proper places. In addition, a good bite impression is obtained. I employ compound<sup>1</sup> for this, although wax may be used. The grooves, locks, pins or boxes are covered with moldine. The purpose of covering parts of the internal surface of gold attachments with moldine will follow. (The inlays will readily be removed from the metal model without destroying the margins.)

2. Fusible metal is then poured into the gold attachments which are firmly seated in the impression. This is continued up to the necks of the abutment teeth. Just before the fusible metal hardens, retentive wire clips are inserted. The remainder of the plaster impression (adjacent teeth and edentulous ridges) is soaked

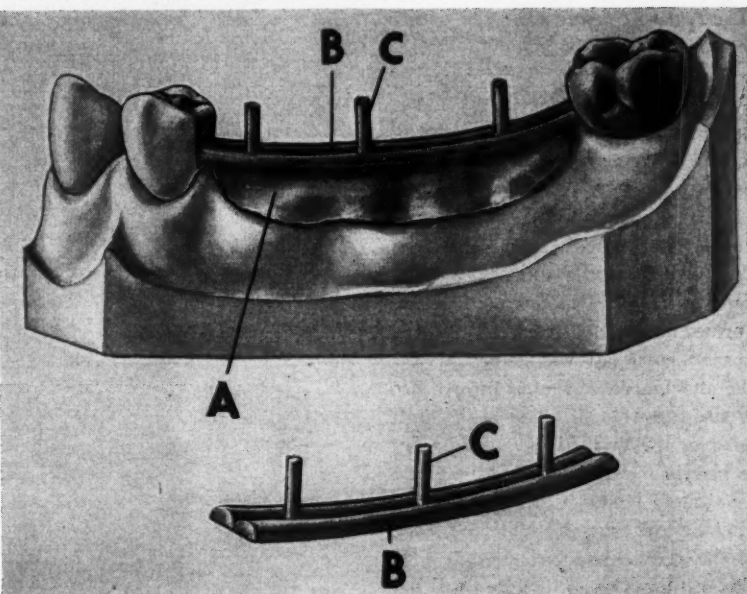


Fig. 1—A, Tin foil adapted to model; B, 14 gauge half-round wax; C, 14 gauge sprue wire.



Fig. 2—D, Soft wax used to attach sprues C to sprue former A. B shows the 14 gauge half-round wax as in Fig. 1.

ed in Gold Dust solution for a few minutes. This impression is then poured in stone and separated.

3. The case is mounted on a crown and bridge articulator in the usual way. The compound bite, if compound is employed, will eliminate a plaster

impression of the opposing teeth.

4. The attachments are easily removed from the metal teeth. The inlays are cleaned of the moldine; pickled in acid; washed in soda, and replaced on the model.

5. The edentulous ridge is covered

<sup>1</sup>Perlow, Jack: Combination Compound Bite and Impression, *DENTAL DIGEST*, 64:95 (March) 1940.

with tin foil, no more than a millimeter thick. Tin foil from a number 1 x-ray film may be used. Several thicknesses of such foil will suffice.

6. Two strips of 14 gauge half-round wire wax (Kerr's) are laid over the ridge, starting from one inlay and continuing to the other inlay. The two wax wires are fused with a hot spatula.

7. Approximately in the center of each proposed pontic a 14 gauge sprue wire is attached at the point of fusion of the wax wires. A sprue wire is used for each pontic.

8. The sprues to which the half-round wax wires are attached are removed from the model. A sprue former is now made ready. The sprues are waxed carefully to the sprue former, soft wax being used for the attachment. A ring of proper size is also prepared. Investment is painted over the wax wires and the ring is placed over the sprue former. The investment is slowly poured into the ring and at the same time the sides of the ring are tapped slightly with the spatula. The sprue wires will become gold posts when cast with gold. I have been using oralium which is economical and answers the requirements as a high-fusing and hard gold.

9. After cleaning and pickling, the casting is placed back on the model. The sprue wires are cut from the button, a post from 4 mm. to 8 mm. being left. Clearance of about 2 mm. is usually desirable and is determined by closing the articulator.

10. Assemble the bar with the post or posts to the attachments. The bar is placed back on the ridge of the model. The ends are sticky-waxed in

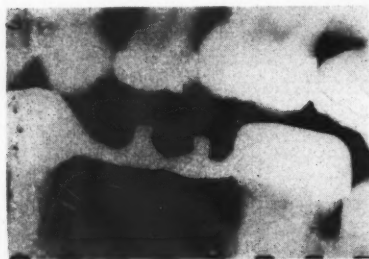


Fig. 6—Roentgenogram showing old tube and post bridge used with acrylics but completely encased in acrylic. Replacement in case of too much wear can always be made in the mouth.

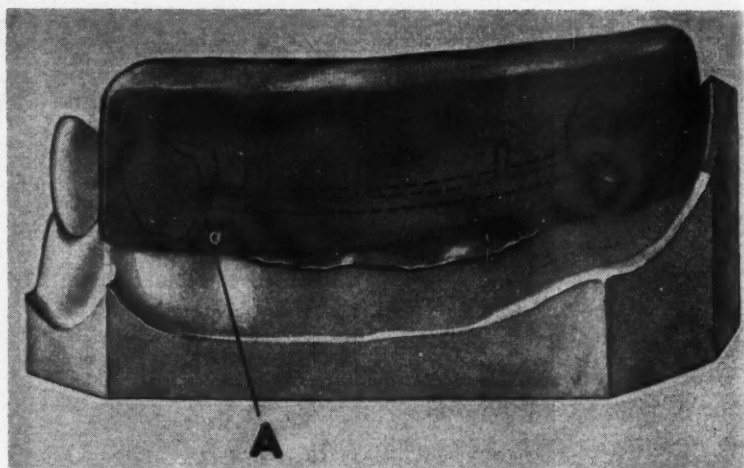


Fig. 3—Compound core employed to assemble bar to attachments. Note A, sticky wax to fix bar in proper position.

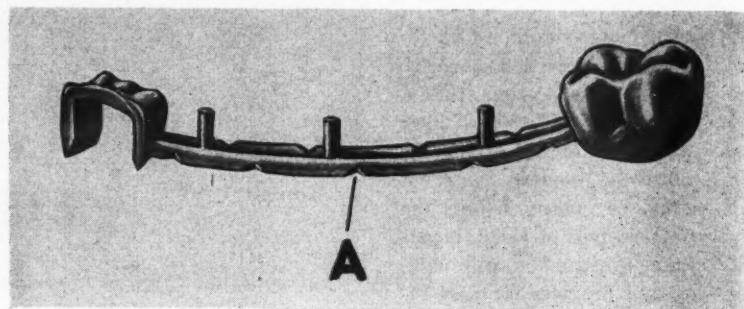


Fig. 4—Cast bar, posts, and inlays in one piece. Note A, notches cut out with a disc for additional retention.

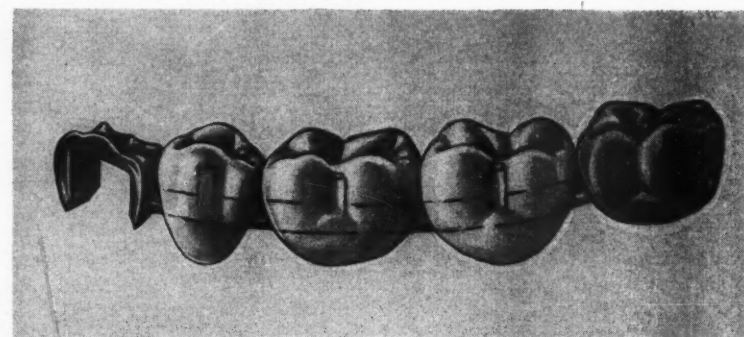


Fig. 5—Acrylic bridge completed, showing relation of position of bar and posts within acrylic bridge.

position. A compound core is employed to fix the exact relationship between the bar and the inlays. After it is chilled, the core impression is removed from the model. The bar is usually carried away in the compound, because the posts and the inlays are waxed into position. Bridge investment is poured and allowed to set.

11. Hot water is employed to sep-

arate the compound from the investment block.

12. Soldering is done in the usual manner. A high grade solder should be employed: 600, fine, is advisable. In this connection, one of the finest all-purpose soldering pencils is the wire tungsten obtained from a 200 Watt bulb.

13. When soldering has been completed, if the bar and inlays go back

on the model properly, their insertion in the mouth will be satisfactory. A fusible metal model cannot be distorted, chipped, or broken as stone can, and can be tried on and off indefinitely without loss of accuracy. It is, therefore, not necessary to try the bar in the mouth. All that is really required is a good plaster impression. To increase the retention of the bar, notchings are made with a carbondum disc. Finally, the tin foil is removed from the model.

14. The case is completed in the usual manner. The waxed case is invested in the flask, processed and finished.

In the event of wear, replacement with the bridge in the mouth is accomplished as follows: With a new bur, the remaining acrylic is removed from the pontic. The post is completely exposed to its base. A tooth is waxed over the post in the mouth. This is then reproduced in acrylic in the usual manner and cemented in the mouth.<sup>2</sup> This is the most important consideration for this method of internal bar construction with posts cast in one piece.

#### Advantages

1. An internal bar of maximum

<sup>2</sup>Perlow, Jack: Acrylic Case Report, D. Outlook, 30: 271 (June) 1943.

strength is obtained which will neither bend nor break. It affords excellent retention for acrylic material.

2. The bar accurately follows the contour of the ridge no matter how irregular. The bulk of the acrylic material is distributed in equalized proportion and therefore permits maximum strength of acrylic pontics.

3. In the event that wear should occur, adequate provision is made for proper replacement with the bridge in the mouth.

4. This method is simple and does not require numerous soldering operations.

1684 West Second Street.

## The Child with the Cleft Palate

(An Abstract)

[From Current Comment, J. A. M. A. 123:906 (December 4) 1943]

THE DEPARTMENT of Speech and the Institute for Human Adjustment of the University of Michigan has issued an illustrated booklet for parents on the subject of cleft palate. The booklet is a practical aid in acquiring an accurate and sensible understanding of the problems involved and a guide in solving these problems:

1. The nature of the anomaly is explained, and a correct attitude of the parents toward the child and toward the anomaly is suggested.

2. The baby should be fed with the bottle and nipple so that he can have exercise in sucking and swallowing.

3. The lip defect should be repaired, preferably during the first month, by a surgeon who specializes in oral surgery.

4. As soon as the baby reaches the age at which children usually start to chew, he should be taught to chew on solid food. These chewing activities are the muscle movements out of which speech develops.

5. The baby with a cleft palate should be encouraged to coo and to babble.

6. The operation on the palate should be performed some time between the eighteenth and the twenty-fourth month.

7. When the palate has been repaired, the first problem is to train the soft palate to function. The best plan to follow at this time is for the parents to consult a speech clinic regarding this training.

## We Can't Pay You, But—

NO DENTAL author can ever be paid for a valuable technical or scientific article. The value of such material is above a monetary basis. In the preparation of a technical article, however, an author often expends money for drawings, photographs, models, or graphs. We would like to help defray some of these expenses.

Until further notice, THE DENTAL DIGEST will allow \$25.00 toward the cost of illustrations provided by the author of every article accepted.

Before the year is out about 20,000 of our dental colleagues will be in military service. Few of them will have the time, the facilities, or the opportunities to develop new techniques or to write for the dental literature. They will be eager, however, to read of the new developments in dental science and art.

Writing articles for publication in technical journals can be a contribution to the war effort, because that is how to help our dental officers in the

Army and Navy keep abreast of technical advancements, and it is one way to improve the skill and services of civilian dentists on the home front.

If you have a constructive idea, an innovation, a new result of tried and proved experiment, put it down in writing, illustrate it, and send the material to: The Editor of THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

We hope that you will accept this invitation!



# Facial Reconstruction

W. I. TATE, D.D.S., Springfield, Ohio

## DIGEST

Because dentists are familiar with the use of homogeneous and plastic impression materials, their prosthetic skills may be employed in the reconstruction of lost anatomic parts, particularly of the face.

A case is reported in which a nose, lost in an accident, was restored by prosthesis.

IN THE PRESENT war there will be many facial injuries which will need to be corrected by dentists. With homogeneous and plastic impression materials, it is possible to obtain impressions of the face, on which mechanical restorations can be constructed. Dentists are familiar with these materials and their prosthetic skills may be readily adapted to the needs of facial restoration.

## Report of Case

A woman, aged 56, lost her nose in an accident (Fig. 1). She was physically unable to undergo plastic surgery.

The patient wore glasses with bifocal lenses. Attachments were made to the frames of her glasses. A framework was constructed of bent clasp wire (Fig. 2):

1. The frames were set on the face model at 15 degrees to accommodate the bifocal lenses; the frames were attached with modeling compound to the model. The framework was then soldered to the frame holding the glasses.

2. The pattern of the nose was made of beeswax and carved to shape (Fig. 3). Old pictures of the patient and all landmarks of the face were used to determine the shape and size.

3. If the patient wishes to have restored a former blemish, such as a wart, it is added to the restoration at this time.

4. The tone of the voice presented the most difficult problem. As is seen



Fig. 1—Appearance of patient after accident to nose.

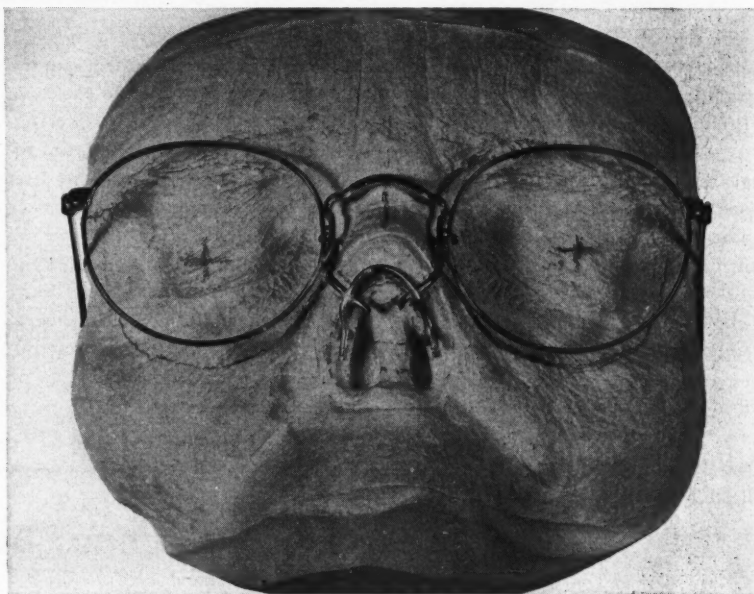


Fig. 2—Framework of bent clasp wire attached to glasses to support restoration which is constructed on model of face.

in Fig. 1, the opening in the nose is larger on the right side than on the left. It was necessary to make the opening of the left side larger and close the right side in order to give the voice proper tone.

5. The pattern is processed as follows:

- a) Make a wax pattern for the restoration.

- b) Invest in a dental flask as for a denture.

- c) Boil out the wax in clean water.

- d) Pour clean, boiling water over the mold to insure removal of all wax. Dry the surface with a chip blower or air syringe.

- e) Cut resin in small pieces or strips, from 2 mm. to 4 mm. thick and from 2 cm. to 3 cm. long, for convenience.

- f) Pack in a hot flask immediately.

- g) Pack the cavity full and make a trial closure with wet cellophane between the top of the flask and the material.

- h) Open the flask; cut the flash away; add new material, and again make a trial closure.

- i) Place in the press and apply pressure. Put the press and case in boiling water for about 5 minutes. Remove from the water and screw the press down until the halves of the flask are closed. Let stand for 5 minutes and then open and inspect. If more material is needed to fill the mold, it should be added at this time. Reassemble the flask with cel-



Fig. 3—Pattern of artificial nose made of beeswax and carved to shape.

lophane. Final closure is made by screwing the press down tightly.

j) Place in boiling water for 15 minutes. Remove and place in cold water for 30 minutes or more before releasing pressure.

k) Separate the cold flask and remove investing material. Wash in soap and water; dry in air or with a clean cloth.

l) Apply talcum powder to the dry

surface. This helps to protect the surface from dirt.

m) A dry rag wheel may be used to smooth any small irregularities on the surface. Care must be used in this operation so that the surface will not be marred by excess heat; in other words, apply light pressure on the specimen while finishing.

n) Edges can be reformed or reshaped by a hot, clean, stainless steel



Fig. 4—End-result.

spatula. This requires some skill and careful application in order not to burn or discolor the resin.

#### Comment

The acrylic resin (S-79) when processed has the same consistency as rubber dolls with which children play, and is of a light pink shade. With the many shades of cosmetic products today, one is able to select the proper shade to blend with the complexion for further concealment (Fig. 4).

*Arcue Building.*

### Ulcerative Gingivo-Stomatitis

(Continued from page 534)

ever the predisposing cause, Vincent's spirochete and fusiform bacillus are the organisms found in the condition, but it has not been proved that they are the causative organisms. The herpes simplex virus has been considered a possible cause; the presence of the virus in the mouths and of the antibodies in the blood of children having epidemic gingivo-stomatitis has been observed. The condition, however, seems to be of a character different from that in which the Vincent's spirochete and fusiform bacillus predominate.

#### Treatment

Successful treatment has been obtained by the use of oxidizing agents, such as chromic acid, hydrogen di-

oxide, potassium chlorate, and sodium perborate, either alone or in combination. Equally good results are reported for antiseptics and caustics, such as phenol and the aniline dyes, and iodine in either weak or strong solution or produced in the nascent state. Arsenic preparations are the choice to combat the activities of the spirochete; they have been used both as local applications (liquor arsenicalis) and by intravenous injections (neoarsphenamine). Physiologic therapeutics, such as the use of hypertonic saline solution and of controlled lavage with such simple compounds have been successful.

Any deficiency of accessory food factors is treated by the use of reinforcing substances, such as ascorbic

acid or niacin, alone or in combination with local treatment.

A supporting and protecting splint, consisting of zinc oxide and oil of cloves, is carefully applied to the gingival margin and the necks of the teeth. This provides rest and protection of the injured part from the repeated injuries associated with eating. Surgical measures may be indicated but should not be used in an acute stage of the disease.

Mild cases of the condition often can be cleared by careful scaling. Owing to the possible coexistence of a blood disease, such as leukemia or pernicious anemia, with Vincent's disease, a blood examination is advisable before a prognosis is made.

# Attachments and Reinforcements for Acrylic Pontics

FRED A. SLACK, JR., D.D.S., Philadelphia

## DIGEST

Suggestions are made regarding attachments and reinforcements for acrylic pontics. Heretofore there have been unsuccessful results owing to improper attachments or attachments that were too large.

The function of an attachment is threefold: (1) to attach the pontic to the abutment; (2) to prevent rotation and cleavage of the pontic; (3) to connect two or more bridge abutments rigidly. To accomplish this function the principles are discussed for the construction of anterior and posterior bars, acrylic abutments, thimbles, and frames.

## Technique

**Abutments**—Whether fixed abutments in the form of accepted crowns, inlays, pinlays, or other types are used or whether the abutment is an accepted clasp, the resulting bridge should be as strong as these members. The acrylic pontic under normal conditions should be the last to give way. This can be accomplished if the proper method of attachment from abutment to pontic is utilized. An attachment must: (1) attach the pontic to the abutment; (2) prevent rotation and cleavage of the pontic; (3) rigidly connect two or more bridge abutments.

**Attachments**—Sound bridgework needs at least two abutments, although one of the abutments may be in the form of an occlusal rest. Pontic attachments should never be straight nor bulky. A straight line presents an axis around which a solid body may rotate. A bulky attachment weakens the pontic by displacement.

**Bars**—Although it is possible to utilize preformed wrought bars or

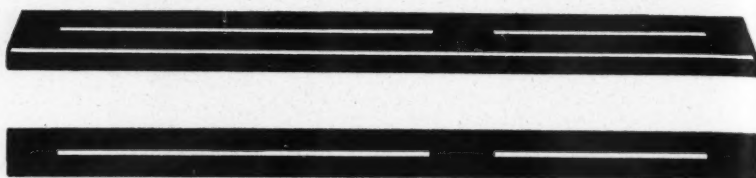


Fig. 1—Longitudinal knife split through center of bar. Note uncut ends.



Fig. 2—Split widened by inserting knife and twisting.

wires, it is better practice to use only cast bars from wax patterns made for the case. Wrought bars, although of great tensile strength, are not extremely rigid unless bulky. Cast bars, on the other hand, exhibit rigidity even in small cross sections. Resistance to bend will be increased by solid surrounding acrylic. As the strength necessary is only that needed to resist bending under stress, these rigid cast bars may be made thin.

**Posterior Bars**—All posterior attachments should present a saddle-like bearing which is embedded approximately one third of the distance from the gingival to the incisal region. This is constructed as follows:

1. A piece of 14 gauge or 16 gauge casting wax is cut into a ribbon bar a little longer than the span between the two abutments. This bar should be not more than one eighth of an inch wide, depending on the size of the pontic tooth to be supported and the span to be bridged.

2. A longitudinal knife split is made through the center, each end being left uncut (Fig. 1).

3. The split is widened by inserting the knife and twisting (Fig. 2).

4. A transverse curve is applied to follow roughly the contour of the gum tissue over the space (Fig. 3).

5. This bar is placed on the model



Fig. 3—Transverse curve applied to follow contour of gum tissue over space.

and waxed to the abutments. If one abutment is a rest, the other end of this center split bar serves as the rest and should be so waxed.

6. This wax-up is cast in a hard gold, cleaned, and replaced on the model with wax.

7. The abutments and casting are carefully removed by means of a broken match stick waxed across their occlusal surface, and invested in soldering investment.

8. After the bar has been carefully soldered to the abutments, it is cleaned and placed back on the model ready for waxing the pontic. This should present a saddle-like appearance which is open in the center and should pass through the lower middle section of the pontic (Fig. 4). Care must be taken to allow the saddle to be embedded sufficiently deep in the pontic so as not to cause a shadow which would affect the shade of the tooth.

9. In the case of two or more pontics a continuation of these saddle-like arrangements may be made, with each saddle supporting its individual





Fig. 4—Bar soldered to abutments, cleaned and placed on model ready for waxing pontic. Note saddle-like appearance, open in center. Bar passes through lower middle section of pontic.

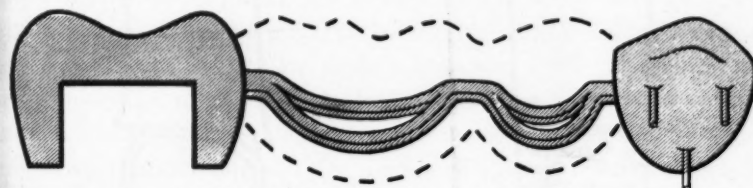


Fig. 5—Continuation of saddle-like arrangements, with each saddle supporting individual pontic.

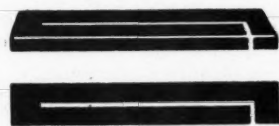


Fig. 6—Cut made right angle to split to separate bars at end.



Fig. 7—Opened bar bent abruptly in middle to form vertical post.

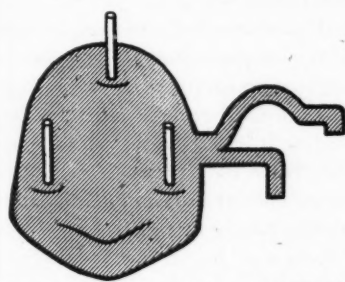


Fig. 8—Single saddle for gingival with longitudinal post.

pontic and coming together at the embrasures of the teeth as illustrated in Fig. 5.

**Anterior Bars**—Anterior pontics require a different treatment, although the attachments are formed from the same type of ribbon bar castings. In the case of one pontic a simi-

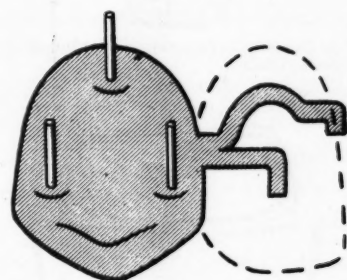


Fig. 9—Longitudinal post directly in center of pontic. Post must not take up more vertical space than would preparation for jacket crown.

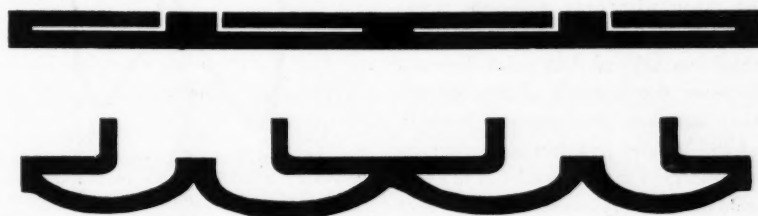


Fig. 10—Extended anterior attachment; cuspid to cuspid abutment.

lar bar is prepared in the wax, although it may be of a thinner section. Instead of utilizing a saddle for the thinner anterior teeth, a post type of attachment is indicated:

1. A section slightly longer than the span to be bridged is selected and a similar split is cut through its longitudinal section, care being taken to keep the section closed at each end.

2. On the end away from the

strongest abutment, a cut is made right angle to the split which will separate the bars at the end (Fig. 6).

3. The unseparated bar is curved to fit the gingival contour.

4. The opened bar is bent abruptly in the middle to form a vertical post (Fig. 7).

5. This opened bar is placed on the model and bent to engage the lower center of the proposed pontic.

6. A casting is made and it is soldered to the abutment as previously.

7. When cleaned and placed back on the mold, a single saddle is had for the gingival in addition to a longitudinal post which juts up from the separated end (Fig. 8). This post must be ground so as not to take up more vertical space than would the preparation of a jacket crown and should be directly in the center of the pontic (Fig. 9).

**Acrylic Abutments**—In many cases the abutment is going to be made of acrylic material. This must be in the form of an all-acrylic crown in which almost parallel preparations with sufficient shoulders are utilized to insure strength (Figs. 11 and 12). In two or three unit cases in which only one pontic is supplied, it is felt that reinforcing with gold is unnecessary. Although this may seem a radical statement, it is one based on

clinical evidence. It is also based on the assumption that sound preparation is accomplished. In the case of broken down teeth, when sound preparations are not possible, gold thimbles and other reinforcing structures are necessary. When two or more pontics are going to be supplied, reinforcing structures are necessary, mainly for rigidity, not actual strength against fracture. All rein-



Fig. 11



Fig. 12

Figs. 11 and 12—Parallel preparations for all-acrylic crown. Shoulders must be sufficient to insure strength.

forcements should be constructed to provide rigidity with minimum bulk.

**Thimbles**—A reinforcing thimble should be perforated so as to form a rigid net (Fig. 13). This may be cast to form an inlay precision fit over the preparation. The acrylic powder may then be processed around and into this thimble for maximum strength. It is suggested that thimbles be made with only sufficient thickness for rigidity, as any existing thickness beyond that point does not increase the strength of the restoration but does decrease the strength of the acrylic restoration. Split bars as described may be soldered to these gold thimbles. It is also suggested that perforated gold thimbles may be of an open-face type on the labial or buccal side to eliminate shading difficulty.

**Frames**—Another type of reinforcing



Fig. 13—Reinforcing thimble perforated to form a rigid net.



Fig. 14—Mesial-distal meeting points connected by a third member extending over occlusal surface of preparation. The point of intersection of the three cast bars serves as connecting point for pontic attachments.

ing structure for all-acrylic crowns is the bi-frame or tri-frame surrounding the preparation. In the case of a molar



Fig. 15—Adaptation for anterior preparations.

a thin ribbon type gold structure is cast following the gingival shoulder labial-lingually, and meeting mesially and distally at a point approximating the center of the preparation. These mesial-distal meeting points may be connected by a third member, extending over the occlusal surface of the preparation (Fig. 14). The point of intersection of the three cast bars serves as the connecting point for pontic attachments. These are waxed and cast in one piece. Again rigidity and minimum bulk are emphasized. This procedure may be followed on anterior preparations either by omitting the third occlusal bar or by extending it lingual to the incisal (Fig. 15). When the tri-frame type is used on an anterior preparation, the labial portion may be made either extremely thin or may be cut away entirely to improve the shade.

32nd and Spring Garden Streets.

#### If Your DENTAL DIGEST Is Late

IN WARTIME, magazine mail is delayed because the postal service is overburdened. We mail THE DENTAL DIGEST each month on its scheduled mailing date—the fifteenth of the month of issue. But it is impossible to control the date of delivery to readers. Please be patient if your DENTAL DIGEST is late.

## The Editor's Page

RECENTLY a dental officer, Lieutenant Herbert Hawley, serving with the Marines, has been described by his commanding medical officer as "the most completely fearless individual I ever knew." We can be certain that an officer of this type is an inspiration to every man in his unit. The contributions that he makes in combat are not through his skill as a dentist; there is no time in combat for anything except emergency dental treatment. The report of Doctor Hawley's gallantry did not say in what capacity he served, whether as an auxiliary medical officer or with a machine gun in his hand; but whatever part he played, his contribution to group morale was inestimable. There are others of the Hawley type among dental officers. They do a great deal to contribute to victory.

When the appalling circumstances are revealed, we learn that psychiatric casualties are the heaviest in modern warfare. The most common are anxiety states with morbid fears and vague somatic complaints; nostalgia, the wishing to be home again among familiar faces, may be a form of psychiatric disturbance. In a plea for auxiliary psychiatric service in the Army, the eminent neuropsychiatrist, Lieutenant Colonel William C. Menninger,<sup>1</sup> states that "from 8 per cent to 10 per cent of men examined for military service are rejected for psychiatric reasons and nearly 30 per cent of the discharges from the Army are for psychiatric reasons. In contrast, only 2 per cent of the medical profession are psychiatrists." To discover the psychiatric personalities and to treat them requires auxiliary personnel trained in modern psychiatric methods.

Colonel Menninger cites the fact that following the last World War more hospital beds were required to care for mental casualties than for any other type. He estimates that for every veteran requiring such care, the government spent \$30,000. It is believed that this war of constant movement, of powerful and destructive machines, fought on unfamiliar types of terrain, will produce more psychiatric casualties

than did World War I—unless men who are suffering from fatigue and anxiety states are recognized early and treatment is begun immediately. Enforced rest by sedation and generous food intake are the most effective methods of treatment.

The dental officer of tactical units has an opportunity to become well acquainted with his men. He sees them under training conditions, in transit and in combat. If the dental officer is the sort of person who is eager to act as a confidant, friend, and Father Confessor to the men of his unit, he can act as an important aid to the medical officer; that is, if the dental officer has enough imagination and enough interest to ground himself by study in the fundamentals of military psychiatry. Although the actual field of dental practice is limited to the treatment of the teeth and supporting tissues, there is no limit placed on the field of the dentist's interest; he and he alone restricts and limits his vision. Any dentist who is honestly ambitious to learn more within the fields of medical arts and sciences has merely to ask and he will receive. My own experience with medical men, whether they are obscure general practitioners, presidents of the American Medical Association, Nobel prize winners, members of medical faculties, men on the staffs of the Surgeons General, or heads of such great institutions as The Mayo Clinic and Lahey Clinic, convinces me that medicine is unselfish in its willingness to cooperate with dentistry. I have known physicians in all these categories and found them, without exception, genuinely interested in the advancement of dentistry.

In other places and on other occasions I have expressed the apprehension that in some instances medical schools are attempting to dominate dental education and that the Medical Corps of the Army and Navy do not always give the Dental Corps proper recognition. This attitude, I fear, springs in part from our own deficiency in education and our own narrowness of interests. When we demonstrate by studious application and by solid accomplishments that we are worthy, medicine will cooperate unhesitatingly.

<sup>1</sup>Menninger, W. C.: Psychiatric Problems in the Army. J.A.M.A. 123:751-754 (November 20) 1943.



# Location of Retained Roots and Foci of Infection in Edentulous Jaws

HERMAN MEYERS, D.D.S., Pittsburgh

## DIGEST

A roentgenographic method is suggested for location of a retained root or a focus of infection in the jaw. Pins placed vertically at specific points on the films and horizontal markings made with an indelible pencil on the ridge serve as accurate landmarks for subsequent measurement in determining the exact location of the retained root or focus of infection.

### Placement of Pins

PINS ARE inserted in ten films for a

full-mouth examination to serve as landmarks for locating retained roots or foci of infection on roentgenograms (Fig. 1).

1. For anterior regions, insert a pin in the center of a vertical film.

2. For cuspid and bicuspid regions, insert a pin along the mesial edge of a vertical film.

3. For molar regions, insert a pin along the mesial edge of a horizontal film.

### Film Placement

*Incisor Region*—Place the film vertically with the pin directly behind the median line.

*Cuspid-Bicuspid Region*—Examine

the area and locate the most pronounced labial prominence; any irregularity or prominence on the ridge may be used. Place the film vertically with the pin lingual to the cuspid prominence, the corner of the mouth, or whatever landmark has been selected.

*Molar Region*—Grasp the cheek with the thumb and forefinger and pull it away from the jaws; this causes muscle attachments along the ridge to become prominent. Select a muscle attachment for a landmark, and place the film in a horizontal position with the pin lingual to the most prominent muscle attachment found in the vestibule. Expose and develop

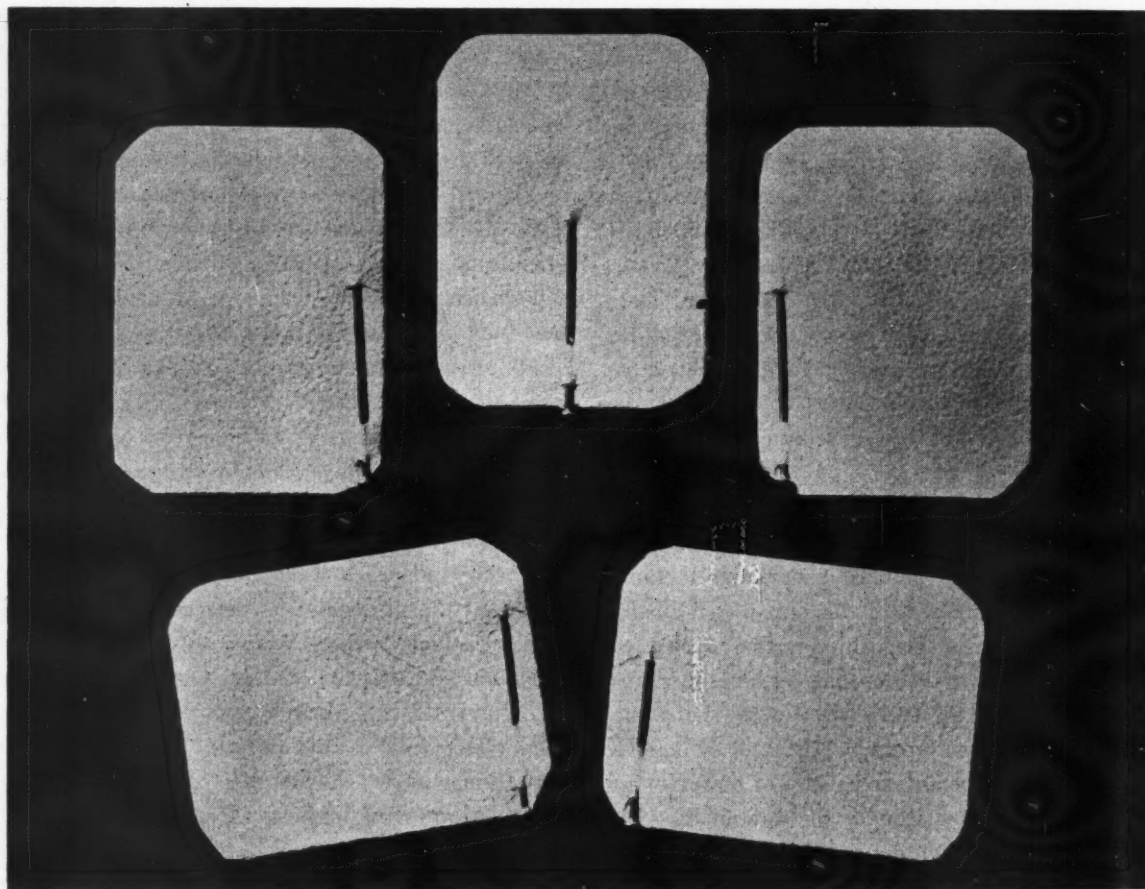


Fig. 1—Pins inserted in films to serve as landmarks: incisor region; cuspid-bicuspid region; molar region.

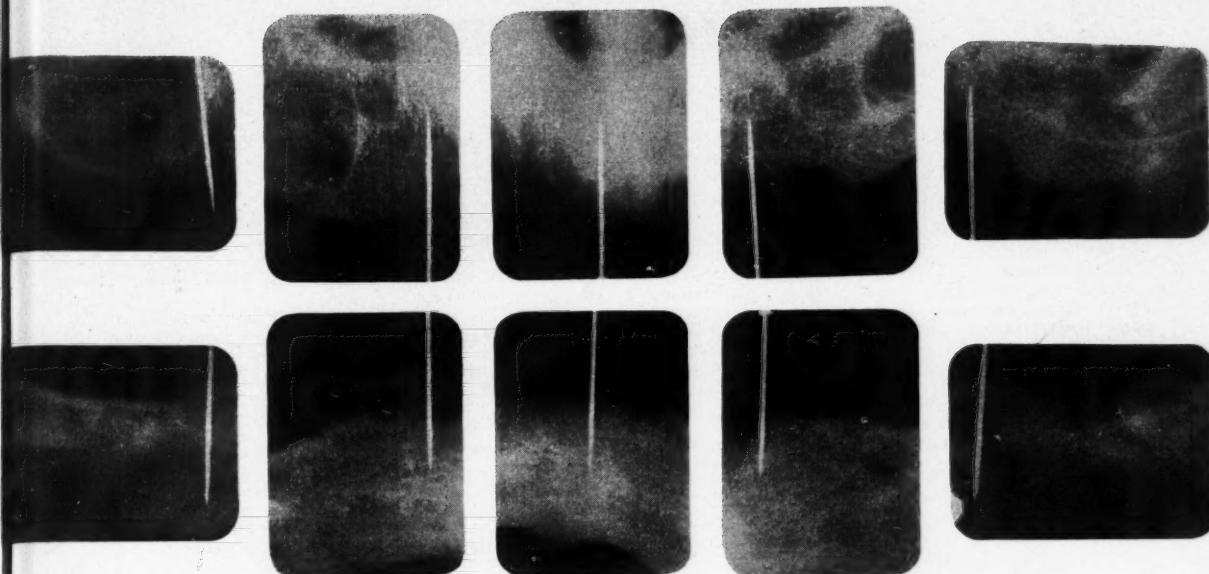


Fig. 2—Roentgenograms showing pins serving as landmarks in locating retained roots and foci of infection.

the films in the usual manner (Fig. 2).

#### Root Location

1. If a retained root or a focus of infection is revealed in the roentgenogram, measure the distance on the roentgenogram from the image of the pin to that of the root.

2. With an indelible pencil, make a vertical line on the labial or buccal side of the ridge, the same distance from the landmark as was measured on the roentgenogram.

3. Measure the distance on the roentgenogram from the crest of the ridge to the root.

4. Make a horizontal mark across

the vertical line on the ridge, the same distance above the crest of the ridge as was measured on the roentgenogram.

5. The point at which the vertical and horizontal lines cross indicates the approximate location of the root or focus of infection in the jaw.

6115 Jenkins Arcade.

#### DENTAL MEETING

### Dates

Massachusetts State Board of Dental Examiners, regular meeting, December 27-29. For information write to Doctor William H. Canavan, Secretary, State House, Boston.

Virginia State Board of Dental Ex-

aminers, regular meeting, Medical College of Virginia, Richmond, January 4. For information write to Doctor John M. Hughes, Secretary, 715 Medical Arts Building, Richmond.

Rhode Island Dental Society, annual meeting, Providence, January, 1944.

Rocky Mountain Midwinter Meeting, thirty-seventh annual meeting, Cosmopolitan Hotel, Denver, Colorado, January 9-12.

California State Board of Dental

Examiners, regular meeting, San Francisco, January 10. For information write to Doctor Kenneth I. Nesbitt, Secretary, 515 Van Ness Avenue, San Francisco.

Chicago Dental Society, eightieth annual midwinter meeting, Palmer House, Chicago, February 21-23.

New Jersey State Board of Dental Examiners, regular meeting, Trenton, June 28-July 2. For information write to Doctor J. Frank Burke, 150 East State Street, Trenton.

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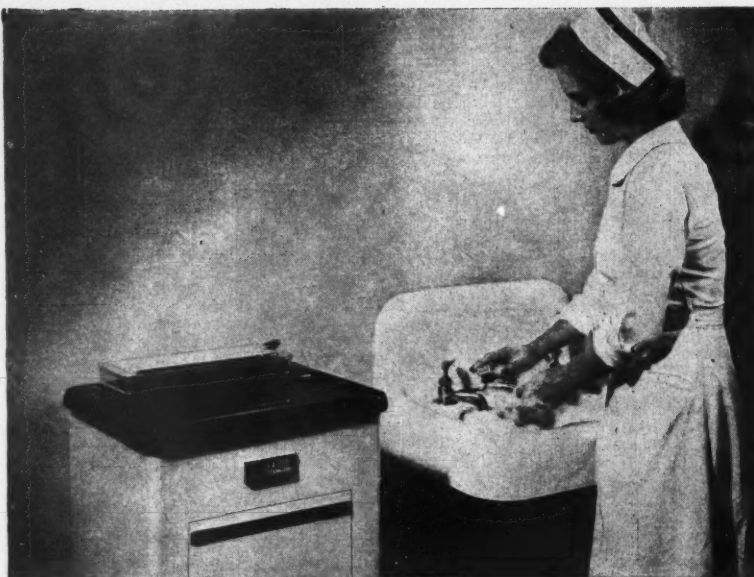
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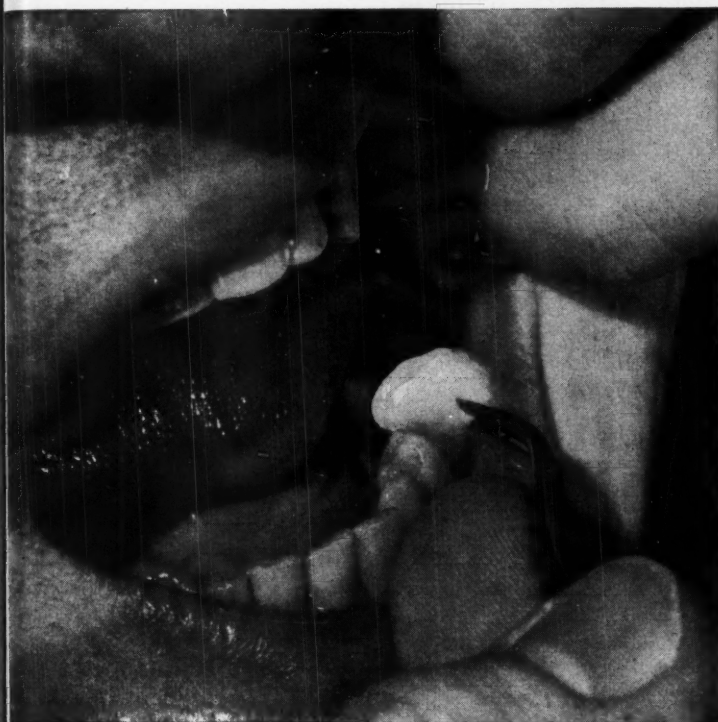
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### **A Year in the Tropics . . .**

For more than a year a group of Naval dental officers has been working in an advance base hospital in the South Pacific theater of the war. Their pioneering adventures are described in the *United States Naval Medical Bulletin*.<sup>1</sup> The report is not flamboyantly written. It is, according to the commanding officer, written "in an objective and restrained manner, but with a slight undercurrent of pardonable pride." It tells the story of "how medical and dental officers and hospital corpsmen unloaded ships,

<sup>1</sup>Porter, J. E.: Forward to Symposium on First Year of Activities of U. S. Naval Base Hospital, U. S. N. Med. Bull. 41:1513 (November) 1943.

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## COMMENTS ON THE WARTIME MEETING OF THE A.D.A.

—featured in December *ORAL HYGIENE*—is the sort of realistic report the profession has learned to expect from *ORAL HYGIENE*. It is all in four pages—because of the magazine's passion for brevity—but, when you read it, you will agree that this is something that needed to be said.

**"Take It Easy, Busy Man!"** by Doctor Arthur Elfenbaum, presents practical suggestions for easing the physical strain under which dentists are working today.

**"How to Kill a Dental Practice,"** another in this popular pictorial series. Originals of these picture pages were exhibited last month at the Ohio State Dental Society meeting in Cleveland by Doctor C. Frank Tuma.

**"Why the Wagner Bill should Not Become a Law"** presents a Naval Dental Officer's warning against controlling dental health through blanket legislation.



President C. Raymond Wells receives the gavel from Retiring President Robinson. Doctor Holly C. Jarvis, first vice president, center.

**"A Defense of the Dental Profession"** is Doctor Kent Kane Cross's spirited reply to Doctor J. L. Chivian's August article on periodic state board examinations.

**"I Was a Dental Officer on the U.S.S. Hornet When Tokyo was Bombed"** tells the thrilling experiences of Lt. Commander Joseph L. Parker (DC) USN. Don't miss this dentist's vivid account. It's exciting history.

**"Dentists! How are Your Teeth?"** is by Doctor Seth W. Shields, whose intimate articles are popular with *ORAL HYGIENE* readers; this one will make many a reader squirm—and decide to mend his ways.

Seven departments appear this month, including Military News, Editorial Comment, Dentists in the News, Technique of the Month, Ask *ORAL HYGIENE*, Laffodontia, and The Corner.

*In Your December*  
*Oral Hygiene*

built roads, constructed huts, installed water and sanitary facilities, set up a temporary hospital to care for several hundred patients while constructing the base hospital, amid the heat, humidity, and primitive environment of a small island in the deep tropics. The fact that they labored in a position constantly exposed to enemy action acted only as a challenge to complete the job quickly. The reward for this effort came when the new hospital was commissioned at the very time the first waves of casualties arrived by ambulance planes and ships from the scenes of land and sea action a few hundred miles away."

In studying the report of the organization of the dental department of this hospital,<sup>2</sup> we are struck by the primitive conditions under which the dental officers were required to work and by their ingenuity in fabricating the instruments and tools with which to work. In addition to working with medical officers in the treatment of jaw fractures, the dental officers were required to perform prosthetic services. Little equipment was at hand, but this did not deter them. With the aid of a machinist's mate, the dental officers constructed flasks, a duplicator, hinged articulators, and bench presses. They salvaged the motor from a broken flour sifter to construct a dental lathe. They constructed a laboratory table top from a piece of aluminum taken from a crashed plane. Working deep in the jungle, they constructed inlays, bridges, and dentures. It is this kind of mechanical ingenuity among our fighting men which will help toward victory.

### An Early Advocate of Preventive Dentistry . . .

Thomas De Quincey is best known for his book "Confessions of an English Opium Eater." Few people know that Mr. De Quincey<sup>3</sup> was driven to the use of opium because of persistent toothaches. No one has written a better statement for preventive

(Continued on page 557)

<sup>2</sup>Patterson, L. F.; Hartwig, Elmer; and Essig, J. L.: R. Activities of the Dental Department of U. S. Naval Base Hospital, U. S. N. Med. Bull. 41:1649-1653 (November) 1943.

<sup>3</sup>De Quincey, Thomas: Confessions of an English Opium Eater, England, Oxford University Press, 1856, p. 4.

(Continued from page 552)  
dentistry than he did in 1882: "Most truly I have told the reader that not any search after pleasure, but mere extremity of pain from rheumatic toothache—this and nothing else it was that first drove me into the use of opium. Coleridge's bodily affliction was simple rheumatism. Mine, which intermittingly raged for ten years, was rheumatism in the face combined with toothache. This I had inherited from my father; or inherited (I should rather say) from my own desperate ignorance; since a trifling dose of colocynth, or of any similar medicine, taken three times a week, would more certainly than opium have delivered me from that terrific curse.

"Two things blunt the general sense of horror which would else connect itself with toothache; viz., first, its enormous diffusion; hardly a household in Europe being clear of it, each in turn having some one chamber intermittingly echoing the groans extorted by this cruel torture. There—viz. in its ubiquity—lies one cause of slight valuation. A second cause is found in its immunity from danger. This latter ground of undervaluation is noticed in a saying (but on what authority I know not) to Sir Philip Sidney—viz. that, supposing toothache liable in ever so small a proportion of its cases to a fatal issue, it would be generally ranked as the most dreadful amongst human maladies; whereas the certainty that it will in no extremity lead to death, and the knowledge that in the very midst of its storms sudden changes may be looked for bringing long halcyon calms, have an unfair effect in lowering the appreciation of this malady considered as a trial of fortitude and patience. No stronger expression of its intensity and scorching fierceness can be imagined than this fact—that, within my private knowledge, two persons who had suffered alike under toothache and cancer have pronounced the former to be, on the scale of torture, by many degrees the worse. In both, there are at times what surgeons call 'lancinating' pangs—keen, glancing, arrowy radiations of anguish; and upon these



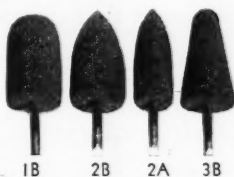
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the basis of comparison was rested—paroxysm against paroxysm — with the result that I have stated.

"In this ignorance, however, which misled me into making war upon toothache when ripened and manifesting itself in effects of pain, rather than upon its germs and gathering causes, I did but follow the rest of the world. To intercept the evil whilst yet in elementary stages of formation was the true policy; whereas I in my blindness sought only for some mitigation to the evil when already formed, and past all reach of interception. In this stage of the suffering, formed, and perfect, I was thrown passively upon chance advice, and therefore, by a natural consequence, upon opium — that being the one sole anodyne that is almost notoriously such, and which in that great function is universally appreciated."

#### Doctors in Politics . . .

A prominent physician of Minnesota, Doctor Walter H. Judd, is a member of the Congress. The Senior Senator from the same state is a dentist. Doctor Judd,<sup>4</sup> in describing his experiences in *Minnesota Medicine* for June, has this to say: "There are now seven of us doctors in Congress, by the way. All of us got together, a while back, in the hope of fostering some sort of over-all scheme to take care of the medical situation. We hoped, at least, to be on the inside so as to survey the situation in the hospitals, in the Army and the Navy and Public Health Service and make an over-all plan. But we didn't get anywhere.

"The Public Health Service was interested but the Army said nothing doing and the Navy was even more reluctant. Each group wants the men and the power and neither will give way to the others. It is the same with many government agencies in Washington.

"In fact, I am convinced that what we need most in Washington is more doctors in government and, above all, more of the kind of mental habits that good doctors must have."


<sup>4</sup>Doctors in Congress, Editorial J.A.M.A. 122:601 (June 26) 1943.

The *Journal of the American Medical Association*, commenting on this statement by Congressman Judd, says that the medical profession should accept responsibility for leadership in medicine in the postwar period. This is true; we will all agree. We would like to think that the members of the Congress would turn to the physicians and dentists among their own members for advice and counsel.



#### The Dentist as an Engineer . . .

According to a civil engineer, Mr. Ray C. Brumfield, dentistry is 50 per

cent engineering. Dental education, therefore, according to Mr. Brumfield, should include more studies dealing with mechanical laws. It is certainly true that dentists are constantly concerned with stresses, strains, leverage, torque, and such mechanical problems. In addition to all this, the dentist is concerned with tissue behavior and biologic laws. It would be well to follow Professor Brumfield's advice and incorporate a course in basic engineering in every dental college.—E. J. R.



## Christmas Greetings





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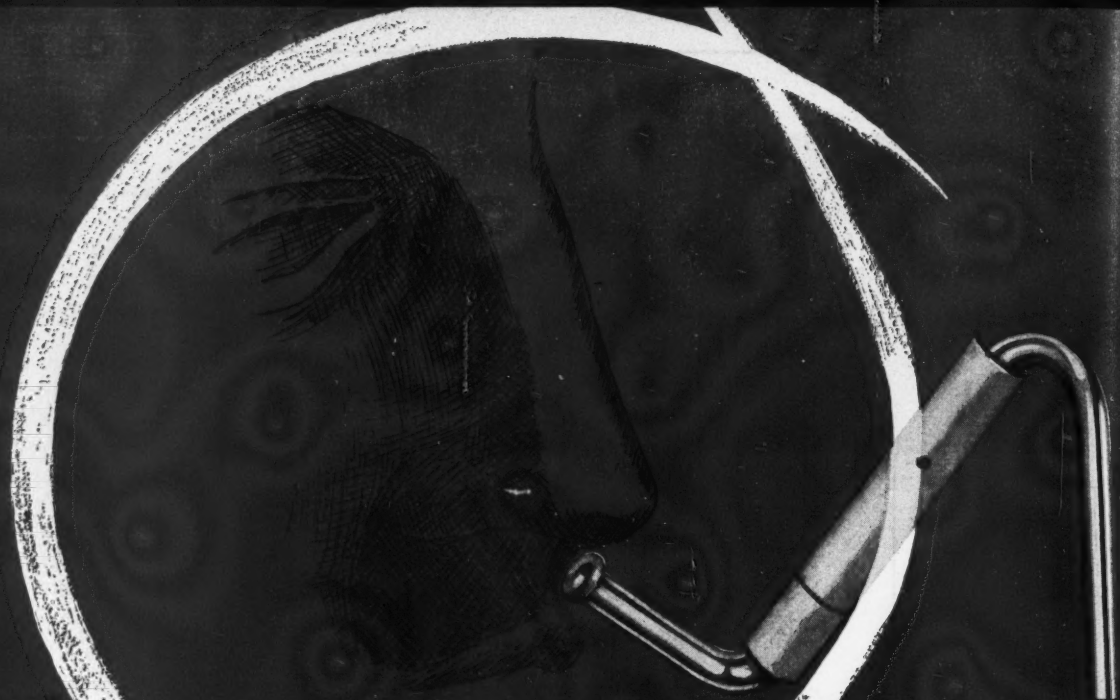
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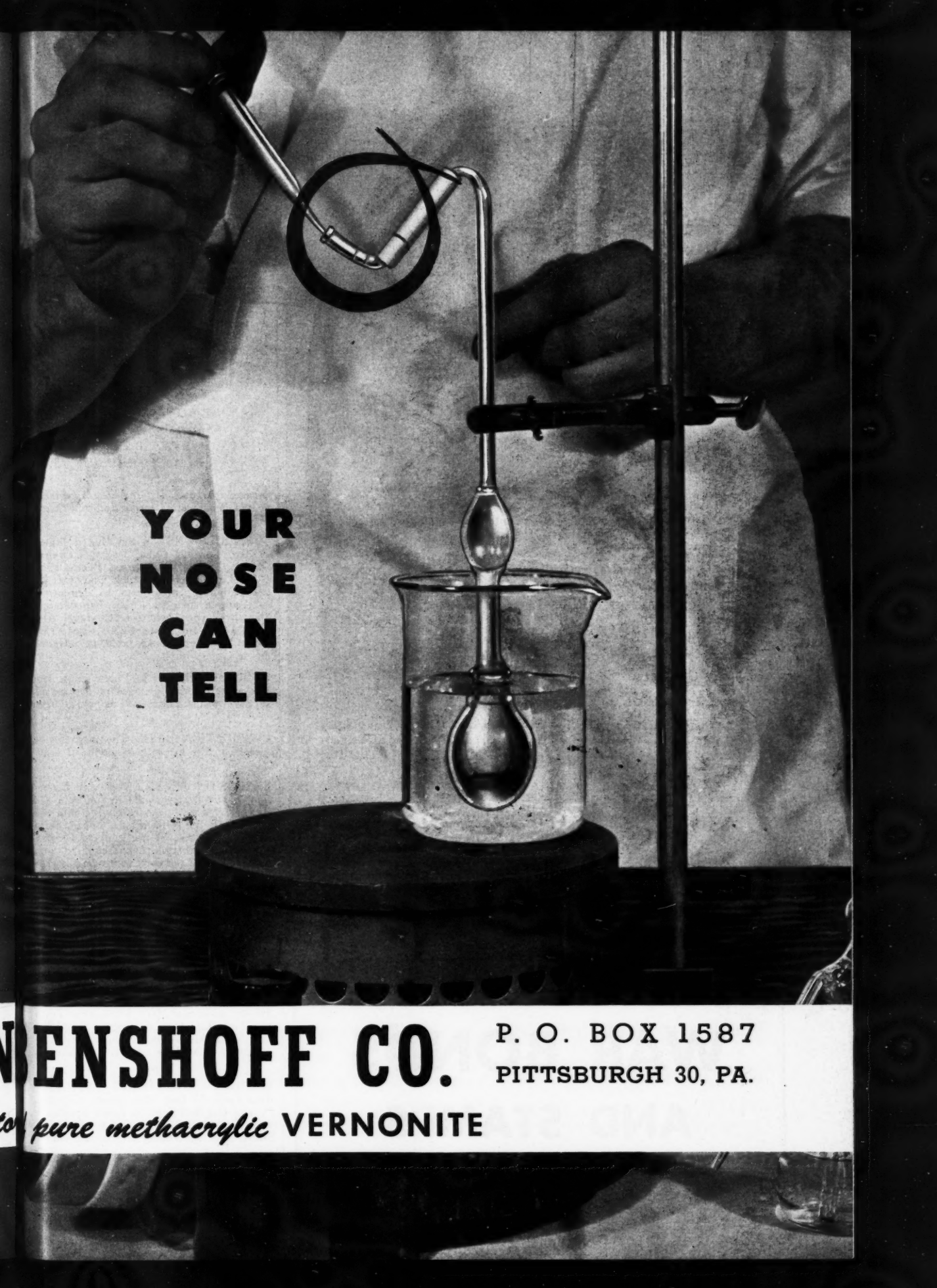
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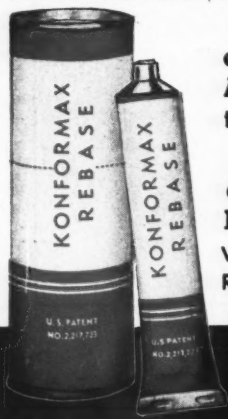
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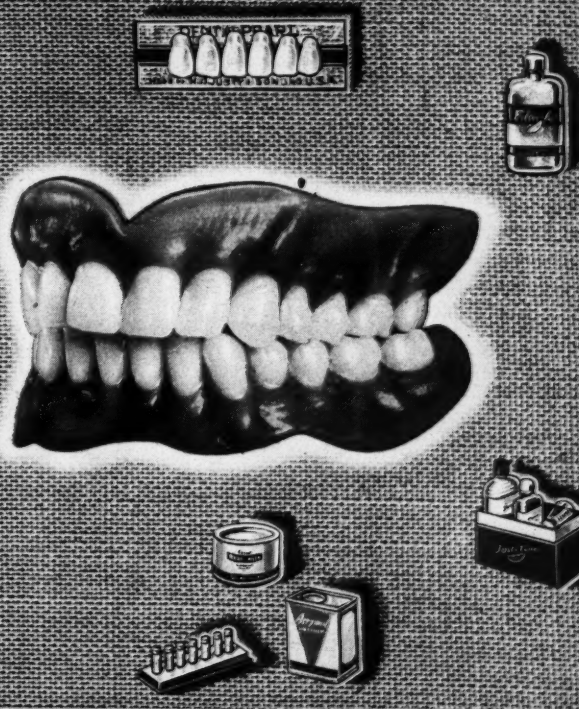
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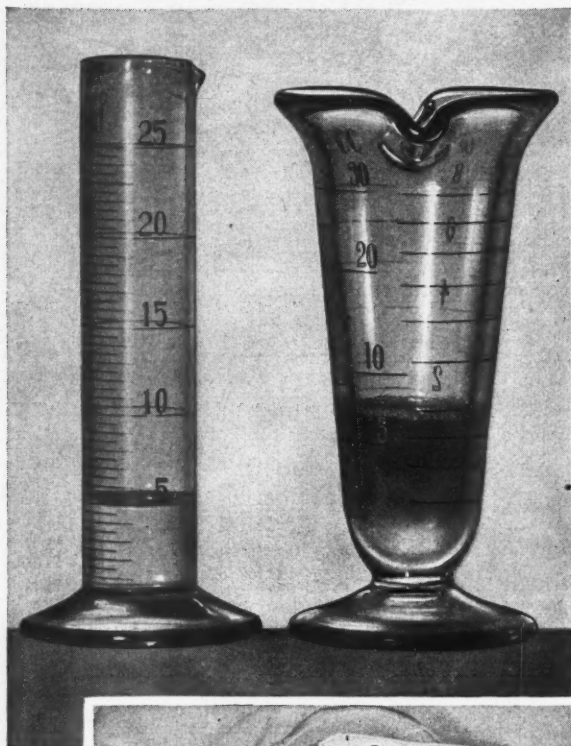
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**T**HE REPUTATION of Sal Hepatica as a mild yet thoroughly effective intestinal cleanser seems to grow brighter with passing time. It has long been known that Sal Hepatica flushes the intestines and initiates peristalsis through creation of temporarily unabsorbable *liquid bulk* in the bowel. New laboratory studies simply corroborate the literature on the "mechanism" of the action of Sal Hepatica salines. For example:

Sal Hepatica in laxative dilution was placed in one isolated canine ileal loop, a cathartic solution in another loop. After one hour in the peritoneal cavity, examination revealed that the laxative dilution of Sal Hepatica had gained 34% in volume, the cathartic dilution 204%.

Try Sal Hepatica when the patient requires a good laxative during your treatment of Periodontoclasia, Pulp Infection, Vincent's Angina, Chronic Abscesses, Retained Root Fragment and Sinus Involvement . . . Sal Hepatica makes a bubbling, pleasant drink . . . Literature upon request.

Graduate on left contains 5 cc. of Sal Hepatica solution as placed in ileal loop of dog. Graduate on right shows 6.7 cc. obtained after loop remained in peritoneal cavity for one hour. Inset depicts distended loops of dog's intestine filled with liquid bulk.

## SAL HEPATICA

SUPPLIES **LIQUID BULK** TO FLUSH  
THE INTESTINAL TRACT



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HERE'S A NEW

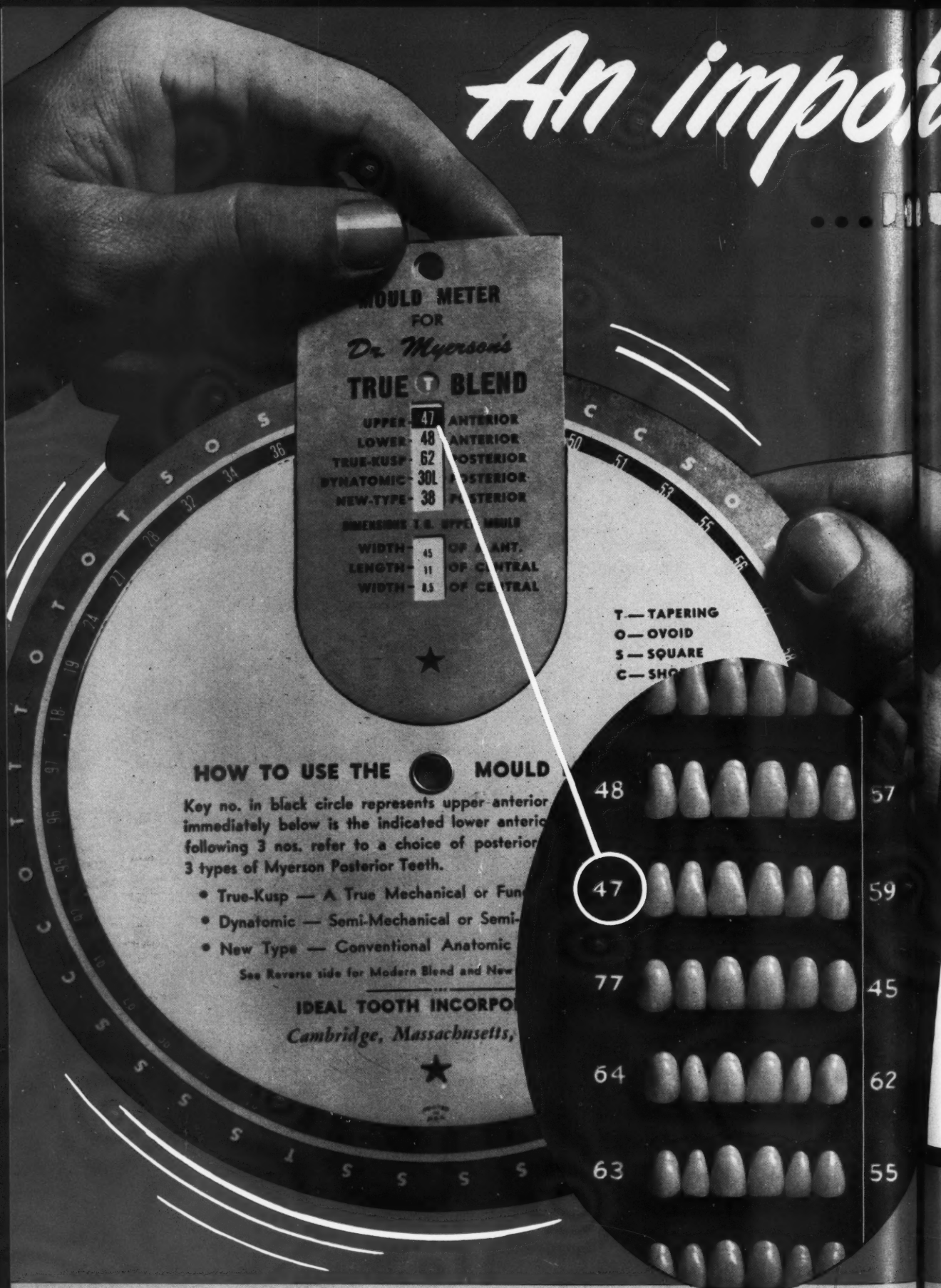
# *Prosthetic Time-Saver*

FOR BUSY DENTISTS





# An important



## MOULD METER FOR *Dr. Myerson's* **TRUE BLEND**

UPPER	47	ANTERIOR
LOWER	48	ANTERIOR
TRUE-KUSP	62	POSTERIOR
DYNATOMIC	30L	POSTERIOR
NEW-TYPE	38	POSTERIOR
DIMENSIONS T.B. TYPE MOULD		
WIDTH	45	OF ANT.
LENGTH	11	OF CENTRAL
WIDTH	85	OF CENTRAL

T — TAPERING  
O — OVOID  
S — SQUARE  
C — SHARP

## HOW TO USE THE MOULD

Key no. in black circle represents upper-anterior immediately below is the indicated lower anterior following 3 nos. refer to a choice of posterior 3 types of Myerson Posterior Teeth.

- True-Kusp — A True Mechanical or Functional
- Dynatomic — Semi-Mechanical or Semi-Functional
- New Type — Conventional Anatomic

See Reverse side for Modern Blend and New Type

**IDEAL TOOTH INCORPORATED**  
Cambridge, Massachusetts,

# Want new TWIST!

## QUICK TOOTH SELECTION

### Dr. Myerson's MOULD METER

IT'S YOURS

# FREE!

Here is an ingenious method of Tooth Selection that is both new and news. New . . . because it is "just out" and News because it enables you to select and order Dr. Myerson Teeth in a quicker, easier way.

#### HOW THE MOULD METER WORKS

Dr. Myerson's Mould Meter is used in conjunction with the Myerson Mould Book. Having first selected the suitable upper mould for the case, merely turn the wheel around to the corresponding Mould Number, for example, 47. Then immediately below, you will find the proper lower anterior Mould Number, and, below that, the Mould Number of whatever Myerson posterior tooth you desire. In other words, given the upper Mould Number, the proper lower and posterior articu-

lation will appear immediately below. The process is simple, automatic, accurate.

On the reverse side of the wheel, the articulation for Modern-Blend and New-Type are obtained in the same manner.

**IDEAL TOOTH INCORPORATED**  
90 Hamilton Street, Cambridge, Mass.

#### COUPON:

Kindly send me without cost a Dr. Myerson Mould Meter. ☐

If you do *not* have a copy of the Mould Book, please indicate. ☐

NAME .....

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Goodwill Toward Men*

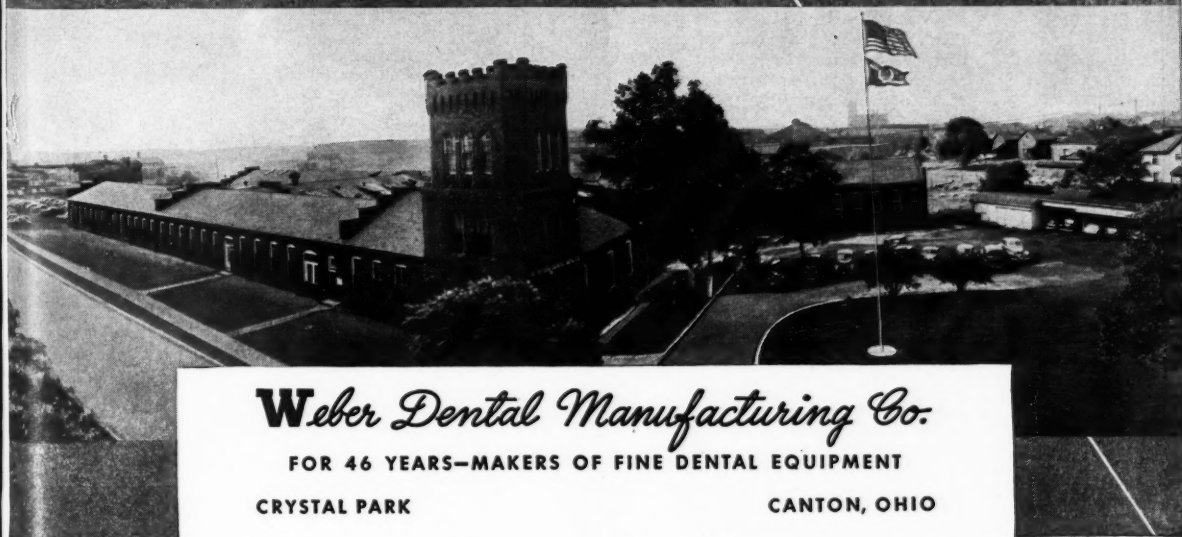
**MAY SOON AGAIN BECOME A REALITY!**

**W**ITHIN the walls of the modernized Weber factory, the hearts and hands of hundreds of willing workers are dedicated 100% to the war effort . . . dedicated to the production of Weber Equipment for our Armed Forces. They are eager hearts . . . yearning as we all do for early victory and for the safe and speedy return of loved ones from world battlefronts. They are willing hands . . . cooperating skillfully in the fabrication of the finest dental equipment we have ever built . . . so that our boys wherever they may be will have the best dental care possible!

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*Merry Christmas and a Happy New Year*

★ from Everyone at Weber to Every One of You ★



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CANTON, OHIO



## "Bureau-Drawer" Dentures

may so easily  
be avoided in  
7 out of 10 cases

As every dentist knows, it is often the wearer's own impatience that accounts for slow adaptation to the new denture, resulting in unfair criticism of the dentist's work—and a "Bureau Drawer" denture.

**"I only wear them when I have to**

—the rest of the time they're in my bureau drawer,"—disappointment to the patient, indirect criticism of the dentist. Yet in 7 out of 10 cases, "Bureau Drawer" dentures would be avoided by the early use of Dr. Wernet's Powder during the adaptation period.

Dr. Wernet's Powder is acceptable on sight to the patient, easy and pleasant to use because of its delicacy and purity. It helps adapt the patient to the new denture and is good insurance against unfounded dissatisfaction or criticism.

Impartial laboratory tests prove Dr. Wernet's Powder to be 26.1% whiter and purer than the average of leading competitors; 50% more viscous (for maximum security) and 46.5% more absorbent (for faster denture control).

**FREE SUPPLY** on Request to Wernet Dental Mfg. Co., Dept. 8-N, 190 Baldwin Ave., Jersey City, N. J.



The basic ingredient of Dr. Wernet's is the same as is used in the making of fine ice cream.



# DR. WERNET'S POWDER

ADAPTS THE PATIENT TO THE DENTURE

So Pure  
In Ice      You Eat It  
Cream

# Recognition of Early Nutritional Failure in Infants, Children, Adolescents and Adults

[From New York Journal of Dentistry 13:400 (December) 1943]

THE SUBCOMMITTEE on Medical Nutrition, Division of Medical Sciences, National Research Council has prepared the following list of symptoms and signs suggestive of early deficiency states in infants and children:

## Symptoms\*

1. Lack of appetite ..... (L)
2. Failure to eat adequate breakfast (L)
3. Failure to gain steadily in weight (L)
4. Late period of sitting, standing, walking ..... (N)
5. Aversion to normal play ..... (L)
6. Chronic diarrhea ..... (L)

7. Inability to sit ..... (L)
8. Pain on sitting and standing ... (L)
9. Poor sleeping habits ..... (L)
10. Backwardness in school ..... (L)
11. Repeated respiratory infections.. (L)
12. Abnormal intolerance of light, photophobia ..... (L)
13. Abnormal discharge of tears ..... (L)

## Physical Signs\*

1. Lack of subcutaneous fat ..... (N)
2. Wrinkling of skin on light stroking ..... (N)
3. Poor muscle tone ..... (D)

4. Pallor ..... (N)
5. Rough skin (toad skin) ..... (N)
6. Hemorrhage of newborn ..... (D)
7. Bad posture ..... (L)
8. Nasal blackheads and whiteheads (N)
9. Sores at angles of mouth, cheilosis ..... (N)
10. Rapid heart ..... (N)
11. Red tongue ..... (D)
12. Square head, wrists enlarged, rib beading ..... (N)
13. Vincent's angina, thrush ..... (D)
14. Serious dental abnormalities ... (N)
15. Corneal and conjunctival changes—slit lamp ..... (D)

\*Key: L, symptoms which parents or teachers might observe.

N, symptoms which nutritionists or nurses might observe.

D, symptoms which physicians (or dentists) would be expected to observe.

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**I**N extending to you and yours our Sincere Greetings for this Christmas Season, it is with the fervent hope that during the coming year we may all see the realization of that age-old Christmas Greeting, "Peace on Earth, Good Will toward Men."

There is little of either on earth at this writing, but we know that this greeting will have a new and real significance when Peace returns and with it our boys from the far-flung corners of the world.

**J. F. JELENKO & CO., INC.**  
136 West 52nd Street  
New York 19, U.S.A.





## The Patient is often TWO PEOPLE

The average patient's valuation of dental care dictates regular dental treatment; fear of *operative pain* too frequently overcomes this sensible reasoning. This is unfortunate both for the patient and for dentistry. But it is the result of a natural human characteristic. People do not want to be hurt. "From 45 to 55 percent forego dental treatment because of their fear of pain."\*

This fear can be overcome only by actually demonstrating that dental treatment need not be a painful experience. McKesson nitrous oxide pain control is accomplishing this in busy practices throughout the country. With the aid of McKesson analgesia general practice procedures are completed in less time because patients are calm, co-operative. For general anesthesia, the McKesson Nargraf provides a technique and control of the patient that saves the operator time and energy.

Plan now for a pain-controlled office. Learn what McKesson equipment is doing for others; can do for you. We shall be glad to tell you.

\*Economic Success in Practice of Dentistry, Journal A.D.A. Oct. 1943.



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1918

1943

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The dental profession for 25 years has  
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Boston 17, Massachusetts



## Never mind "who done it"—pitch in and help get it down!

**T**HIS IS YOUR UNCLE SAM talking—but I'm going to talk to you like a DUTCH uncle, to keep all of us from going broke.

Ever since the Axis hauled off and hit us when we weren't looking, prices have been nudging upwards. Not rising awfully fast, but **RISING**.

Most folks, having an average share of common sense, know rising prices are **BAD** for them and **BAD** for the country. So there's been a lot of finger pointing and hollering for the **OTHER FELLOW** to do something—**QUICK**.

The government's been yelled at, too. "**DOGGONNIT**," folks have said, "WHY doesn't the government keep prices down?"

Well, the government's done a lot. That's what price ceilings and wage controls are for—to keep prices down. Rationing helps, too.

But let me tell you this—we're *never* going to keep prices down just by leaning on the government and yelling for

the **OTHER FELLOW** to mend his ways.

We've **ALL** got to help—**EVERY LAST ONE OF US**.

Sit down for a minute and think things over. Why are most people making more money today? It's because of the **SAME** cussed war that's killing and maiming some of the finest young folks this country ever produced.

So if anyone uses his extra money to buy things he's in no particular need of . . . if he bids against his neighbor for stuff that's hard to get and pushes prices up . . . well, sir, he's a **WAR PROFITEER**. That's an ugly name—but there's just no other name for it.

Now, if I know Americans, we're not going to do that kind of thing, once we've got our **FACTS** straight.

All right, then. Here are the seven rules we've got to follow as **GOSPEL** from now until this war is over. Not some of them—**ALL** of them. Not some of us—**ALL OF US**, farmers, businessmen, laborers, white-collar workers!

**Buy only what you need.** A patch on your pants is a badge of honor these days.

**Keep your OWN prices DOWN.** Don't ask higher prices—for your own labor, your own services, or goods you sell. Resist all pressure to force **YOUR** prices up!

**Never pay a penny more** than the ceiling price for **ANYTHING**. Don't buy rationed goods without giving up the right amount of coupons.

**Pay your taxes willingly**, no matter how stiff they get. This war's got to be paid for and *taxes are the cheapest way to do it*.

**Pay off your old debts.** Don't make any new ones.

**Start a savings account** and make regular deposits. Buy and keep up life insurance.

**Buy War Bonds** and hold on to them. Buy them with dimes and dollars it **HURTS** like blazes to do without.

Start making these sacrifices now—keep them up for the duration—and this country of ours will be sitting pretty after the war . . . *and so will you.*

*Uncle Sam*

## KEEP PRICES DOWN!

Use it up • Wear it out  
Make it do • Or do without

This advertisement, prepared by the War Advertising Council, is contributed by this magazine in co-operation with the Magazine Publishers of America.





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*at every step . . .*

IN keeping with our determination to provide *maximum protection at every step*, Acralite provides an exclusive liquid dispenser . . . to assure that proportions are *exact*; waste is eliminated; the mix is always uniform.

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Acralite has been used for hundreds of thousands of full and partial dentures — in civilian life and amongst our armed forces. *For dentures of distinction, standardize on Acralite.*



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Scientifically compounded for the desired clinical results Ames Cements have been tested and proved by generations of dentists. Ames Crown and Bridge Cement will stand grinding—won't chip when used as base for fillings. Ames Copper Cement contains more copper than any other—exerts positive germicidal action. Ames Plastic Porcelain, the outstanding Translucent Filling Porcelain, is available in single units at the "quantity price." Ask your dealer. Write for booklets. The

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**CEMENTS**  
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AND  
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*Accurate muscle trimming*

*Accurate recording of  
periphery*



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Steele's New Hue porcelain-incisal facings permit the construction of anterior restorations with no exposed metal. The restored teeth appear as *individual*, natural teeth — with naturally translucent incisals and a truly lifelike sparkle.

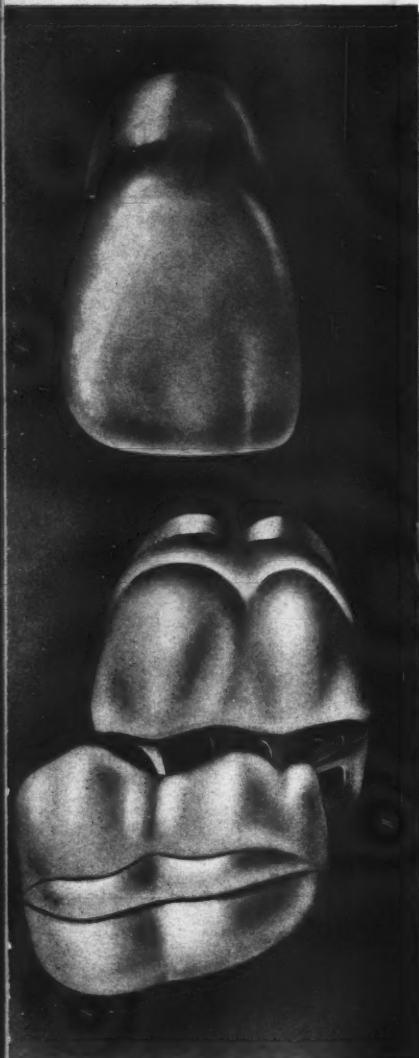
This advance in esthetics does not sacrifice serviceability, interchangeability, or simplicity when the recommended technic is followed. In fact the technic recommended is the *simplest* technic ever offered.

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# FUNCTIONAL DESIGN



*..... In Trubyte New Hue Teeth  
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Facial Appearance and to Provide  
Comfortable, Efficient Mastication*

**I**n the anteriors you have .....

*Biological Forms* that follow Nature's plan for face and tooth-form harmony; *Complete Contours*, mesially and distally, that assure adaptability for individualized arrangements; *Related Forms and Sizes* to give a "form for every face in a size for every case"; *Natural Shades* that make shade selection easy and satisfactory.

In the 20° posteriors you have .....

*Low Cusps* for "easy running"; *Narrow Contacting Surfaces* to minimize occlusal trauma; *Wide Food Table* to follow Nature's plan for holding food and *Scientifically Interacting Knives* to permit truly efficient mastication.

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**TEETH**

# DESIGNED

to reproduce the functions of natural teeth

to maintain or restore attractive appearance

to effect comfortable, efficient mastication

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